

nutritive matter; when the form of the morphology or metamorphosis—the conformable or unconformable type of the changes—pronounces the constitutional diathesis.

"If there be one fact better established than others, in respect of scrofula and scrofulous diseases, it is their hereditary character, the offspring exhibiting bodily and mental powers, and forms of disease similar and analogous to those which have been known to exist previously in one or both parents. This transmission of structural or constitutional and other qualities, from parent to child, is one of those remarkable facts in living bodies, which we look to the recent rapid advances of physiological science to elucidate. To say that children inherit the dispositions and diseases of their parents, and to rest content with the barren assertion, is to leave to conjecture questions of the highest interest to medical and moral science. If the lineaments of the face, the colour of the eyes and hair, the tones of the voice, an ear for music, and mental aptitude, be handed down from father to son, they must be so by a wonderful consentaneous harmony of organization—an almost incredible conformability in the morphology of nutrition; and if the physiology—if the constitution, temperament and mind, be so similar, then, however little we may be able to explain the fact, it follows almost necessarily, that the pathology and diseases will prove so too;—not scrofulous diseases exclusively, but all others also.

"The most certain evidence of the existence of a scrofulous disease,' observes a recent medical writer, 'is afforded by the production of a soft brittle unorganized matter, resembling curd or new cheese, which is found mixed with the contents of abscesses, or deposited in rounded masses of different degrees of firmness, and varying in bulk from the size of a millet seed to that of a hen's egg; sometimes it is enclosed in cysts, and occasionally it is diffused, as if by infiltration, through the natural texture of the part. To the rounded masses of this substance, the name of tubercle has been assigned, and the substance itself has been named tuberculous matter.'"

27. *Seat and Nature of Tubercles in the Lungs.* By WILLIAM ADDISON, of Malvern.—Tubercular consumption and phthisis are terms used to designate that species of disease which consists in the filling up of the air-cells of the lungs,* and the destruction of their vascular walls by a soft, brittle, white matter, named tubercle or tuberculous matter. The best and most recent pathologists have differed in their statements and opinions regarding the seat and nature of tubercles in the lungs, nor are they agreed as to the changes they undergo. LAENNEC describes them as small firm bodies, which gradually enlarge, then soften, and by degrees become converted into a liquid mass. ARNDAL differs somewhat from Laennec; he says, that tubercles soften, not from any spontaneous changes in themselves, but from an admixture of purulent matter poured out from the living texture immediately surrounding them. Dr. CANSWELL states, that tubercles originate from morbid changes in the blood, and that their most frequent seat, is the surface of the mucous membranes; this author believing, in common with many others, that the membrane of the air-cells of the lungs is a mucous membrane. Dr. C. J. B. WILLIAMS states, that "lymph, pus, and tubercle, pass by imperceptible gradations into each other;" and in this opinion I concur, in so far as that pus may pass into tubercle or mucus, or into a mixture of tuberculous and mucous matter, but the converse never can occur.

Tubercles exist in the lungs more frequently than is generally imagined. Of the numerous apparently-healthy lungs which I have examined in the course of my researches, I have found them in about one-third. In their early state they escape notice, unless searched for with a lens in very thin sections, gently extended upon a dark background. In order to make out correctly the primary situation of a tubercle, the examination should be made in the lungs of young persons, who have died of other diseases; for in those who die of consumption, so many changes have taken place, and the several textures of the lungs have been so altered, that it is impossible to find tubercles in that early condition in which alone their situation, in or upon the membrane of the air-cells, can be determined.

* Dr. Cumin in *Cyclopædia of Practical Medicine*, vol. iii. p. 701. Art. Scrofula.

I have repeatedly examined with the microscope the material deposited in the air-cells of the lungs in pneumonia, and compared its characters and appearance with that forming a tubercle, without being able to detect any more essential or constant difference between them, than exists between recently excreted and old pus. The same class of objects—incoherent colourless cells, molecules, and granular matter, appears to constitute the material in both cases—in hepatization or consolidation of the lung from inflammation, and in consolidation from tuberculous matter; and in both cases also, the material takes primarily the shape of the air-cells in which it is seated. In the material forming the consolidation resulting from inflammation, incoherent cellular forms predominate, as they do in recent pus; whereas in tuberculous matter, granular masses and molecules greatly predominate, as is also the case in old pus. And were we to imagine the fluid element of old pus, removed or absorbed, the remaining solid matter would be, in my opinion, tuberculous matter; the colourless elements of blood, pus, and tubercle passing by imperceptible gradations into each other.*

In pneumonia, the consolidating material is, as it were, suddenly thrown out over a wide extent of lung. All the blood-vessels are loaded with colourless elements. The blood itself, when withdrawn, assumes a buffy coat, and the texture, from the various blendings of the red colour of the blood, with the white colour of the new material separated from it, assumes various hues between dark red and whitish yellow.

In phthisis, on the other hand, the consolidating material is deposited at distant points, in a much slower manner; it becomes, as it were, old, before it becomes visible, and I have seen sections of the lung display an appearance precisely analogous, and indeed very similar to that of the face in small pox, and this in a patient who did not die of consumption.

My researches have been in like manner extended to the characters and appearances presented under the microscope by the material taken from pimples, boils, and all kinds of eruptions on the skin, and in all these instances, incoherent colourless cells, granular matter, and molecules, have been found in the greatest abundance. Moreover—and it is a fact of much importance—the same objects have been profusely detected, not only in the fixed textures surrounding the morbid matter, but likewise in blood taken from the vessels, administering to their nutrition. And it would appear, that when any texture becomes involved in a hurtful or destructive inflammation, or in a tuberculous or scrofulous disease, that its physiological type is altered, and its function impaired; the structural elements, whatever may be their normal qualities or characters, become more and more uniform, and at length corpuscular, the corpuscles being apparently identical with those circulating in the blood.

It has been said, that tubercles arise from “an error of nutrition,” which is perfectly true, but no practical advantage is derived from the use of a few words which are applicable alike to all diseases.—*Prov. Med. and Surg. Journ.*, April 7th, 1847.

28. *Abscesses of the Liver opening into the Bronchi.*—M. RAIKEN, in a memoir read before the Belgian Royal Academy of Medicine, has collected accounts of eight cases of abscesses of the liver opening into the bronchi, some of which occurred under his own observation. He regards these abscesses, as eventually curable by the powers of nature, when they can discharge themselves through a fistulous canal, commencing at the suppurating part, and passing on till it reaches and opens into one or more of the bronchial ramifications. On the other hand, it appears from eleven observations, based on pathological examination, that in cases where death has followed the opening of hepatic abscesses into the lungs, the suppurating cavity has not directly communicated with any one bronchus by an intermediate fistulous canal; but, on the contrary, its contents have made their way medietely to the bronchi—i. e., through the intervening tissues, depositing

* By the term *old pus*, the reader will understand that I mean *matter* which has been a long time excreted, and in which the corpuscles or cells having broken down, there remains a thick, more or less fluid material, composed of granular forms and molecules.